System of simultaneous equations that are too wide for paper

$$\begin{vmatrix} \int_\Omega L\left(\phi_1(x,y)\right)\phi_1(x,y)dx\,dy & \int_\Omega L\left(\phi_2(x,y)\right)\phi_1(x,y)dx\,dy & \dots & \int_\Omega L\left(\phi_{nxy}(x,y)\right)\phi_1(x,y)dx\,dy \\ \int_\Omega L\left(\phi_1(x,y)\right)\phi_2(x,y)dx\,dy & \int_\Omega L\left(\phi_2(x,y)\right)\phi_2(x,y)dx\,dy & \dots & \int_\Omega L\left(\phi_{nxy}(x,y)\right)\phi_2(x,y)dx\,dy \\ & & \dots & \\ \int_\Omega L\left(\phi_1(x,y)\right)\phi_{nxy}(x,y)dx\,dy & \int_\Omega L\left(\phi_2(x,y)\right)\phi_{nxy}(x,y)dx\,dy & \dots & \int_\Omega L\left(\phi_{nxy}(x,y)\right)\phi_{nxy}(x,y)dx\,dy \end{vmatrix} \times$$

$$\begin{vmatrix} U_1 \\ U_2 \\ \dots \\ U_{nxy} \end{vmatrix} = \begin{vmatrix} \int_\Omega f(x,y)\phi_1(x,y)dx\,dy \\ \int_\Omega f(x,y)\phi_2(x,y)dx\,dy \\ \dots \\ \int_\Omega f(x,y)\phi_{nxy}(x,y)dx\,dy \end{vmatrix}$$